

REMARKS

Claims 1-55 and 69-72 are pending. An Office Action mailed October 26, 2005 rejected Claims 1-3, 6-8, 13, 14, 16-18, 20, 26, and 69-71 under 35 U.S.C. § 102(b) and rejected Claims 4, 5, 9-12, 15, 19, 21-25, 27-55, and 72 under 35 U.S.C. § 103(a). By way of this amendment, Applicant hereby cancels Claims 1-3 and amends Claims 4-22, 24, 26, 69 and 72. Pursuant to 37 C.F.R. 1.111, Applicant respectfully requests reconsideration of the Application.

REJECTION OF CLAIMS 1-3, 6-8, 13, 14, 16-18, 20, 26, AND 69-71 UNDER 35 U.S.C. § 102(b)

The Office Action rejected Claims 1-3, 6-8, 13, 14, 16-18, 20, 26, and 69-71 under 35 U.S.C. § 102(b) as being anticipated by Vogelesang et al. (4,992,323). Applicant cancels Claims 1-3, amends Claim 4 to become an independent claim, and amends Claims 6, 8, 13, 16-18, 20 and 26 to depend from independent Claim 4. Applicant amends Claim 7 to depend from Claim 6. Applicant also amends Claim 69. With regard to the amended Claims, Applicant respectfully traverses this rejection. No new matter has been added.

Applicant submits that Vogelesang does not teach a fiber layer containing poly diimidazo pyridinylene fibers. Therefore, Applicant submits that amended independent Claims 4 and 69 are allowable over the cited reference.

Because Claims 6-8, 13, 14, 16-18, 20, 26, 70 and 71 depend from allowable independent claims, they are allowable for the same reason that makes their corresponding independent claims allowable.

REJECTION OF CLAIMS 9-12, 15, 19 AND 27 UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claims 9-12, 15, 19 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Westre et al. (6,114,050) in view of Vogelesang et al. ('323). With respect to the amended Claims, Applicant respectfully traverses this rejection. No new matter has been added.

Applicant amends Claims 9-12, 15, and 19 to depend from independent Claim 4. Claim 27 also depends from independent Claim 4 via amended dependent Claim 26. Applicant submits that neither Vogelesang nor Westre teach or suggest a fiber layer containing poly diimidazo pyridinylene fibers. Accordingly, dependent Claims 9-12, 15, 19 and 27 are allowable for the same reason that makes their corresponding independent Claim allowable.

REJECTION OF CLAIMS 21-25 AND 72 UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claims 21-25 and 72 under 35 U.S.C. § 103(a) as being unpatentable over Vogelesang et al. ('323) in view of Blohowiak et al. (5,958,578). With respect to the amended Claims, Applicant respectfully traverses this rejection. No new matter has been added.

Applicant amends Claims 21, 22 and 24 to depend from independent Claim 4. Claims 23 and 25 also depend from independent Claim 4 via amended dependent Claims 22 and 24 respectively. Claim 72 depends from amended independent Claim 69 via dependent Claim 71. Claim 72 has been amended for a reason unrelated to the rejection. Applicant submits that neither Vogelesang nor Blohowiak teach or suggest a fiber layer containing poly diimidazo pyridinylene fibers. Accordingly, dependent Claims 21-25 and 72 are allowable for the same reason that makes their corresponding independent Claims allowable.

REJECTION OF CLAIMS 4, 5, 28-30, 36, 39, 40, 45-47, 50 AND 51 UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claims 4, 5, 28-30, 36, 39, 40, 45-47, 50 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Vogelesang et al. ('323) in view of Vallittu et al. (2004/0166304). The Office Action states that the primary reference discloses the invention substantially as claimed. The Office Action also states that the primary reference does not teach the use of PIPD fibers in the laminate. The Office Action states the secondary reference discloses the equivalence of carbon, aramid, glass and PIPD fibers for use as reinforcement fibers in a resin matrix and that it would have been obvious to one of ordinary skill in the art to use any

well-known high modulus fiber, such as PIPD, as the fibers in the article of the primary reference in view of the teaching of equivalence of glass, carbon and PIPD fibers in the secondary reference. Applicant respectfully traverses this rejection.

Applicant submits that Vallittu teaches the equivalence of various types of fibers only for a limited subset of fiber applications that does not include fiber metal laminates. Vallittu is motivated by the need to improve the adhesion of fiber reinforced composite in the context of dental and medical devices. Vallittu does not teach or suggest any application to fiber metal laminates and is not motivated to do so. In addition to glass, carbon, and PIPD fibers, Vallittu also mentions collagen and cellulose fibers among others. Vallittu states that any combination of the fibers may be used. This suggests that the specific properties of each type of fiber are not significant for the invention in Vallittu. However, these fibers are not all equivalent and interchangeable for the purposes of fiber metal laminates. The specific properties of each must be considered for their specific use. For example, the modulus of elasticity and potential for galvanic reaction with the metal layers must be considered. A person of ordinary skill working with fiber metal laminates would have no reason to look to Vallittu for guidance, as the invention in Vallittu is motivated by creating improved adhesion characteristics in the context of medical and dental devices rather than finding ways to make stronger, lighter, and more corrosion-resistant fiber metal laminates. Applicant submits that neither Vogelesang nor Vallittu teach or suggest using poly diimidazo pyridinylene fibers in the context of fiber metal laminates. Additionally, with regard to Claim 41, Applicant submits that neither Vogelesang nor Vallittu teach or suggest using poly diimidazo pyridinylene fibers in the context of composite aircraft components made of fiber metal laminates. Accordingly, Applicant submits that amended independent Claims 4, 28, and 45 are allowable over Vogelesang in view of Vallittu.

Because Claims 5, 29, 30, 36, 39, 40, 46, 47, 50 and 51 depend from allowable independent claims, they are allowable for the same reason that makes their corresponding independent claims allowable.

REJECTION OF CLAIMS 41 AND 42 UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claims 41 and 42 under 35 U.S.C. § 103(a) as being unpatentable over Vogelesang et al. in view of Vallittu et al., and further in view of Blohowiak et al. Applicant respectfully traverses this rejection.

Claims 41 and 42 depend from independent Claim 28, which is allowable for the reasons stated earlier. Because Claims 41 and 42 depend from an allowable independent claim, they are allowable for the same reason that makes their corresponding independent claim allowable.

REJECTION OF CLAIMS 31-35, 37, 38, 43, 44, 48, 49 AND 52-55 UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claims 31-35, 37, 38, 43, 44, 48, 49 and 52-55 under 35 U.S.C. § 103(a) as being unpatentable over Vogelesang et al. in view of Vallittu et al., and further in view of Westre et al. Applicant respectfully traverses this rejection.


Claims 31-35, 37, 38, and 43 depend from independent Claim 28, which is allowable for the reasons stated earlier. Claim 44 also depends from independent Claim 28 via Claim 43. Claims 48, 49, and 52-55 depend from independent Claim 45, which is allowable for the reasons stated earlier. Because Claims 31-35, 37, 38, 43, 44, 48, 49 and 52-55 depend from allowable independent claims, they are allowable for the same reason that makes their corresponding independent claims allowable.

CONCLUSION

Applicant respectfully submits that all of the claims of the pending Application are now in condition for allowance over the cited references. Accordingly, Applicant respectfully requests withdrawal of the rejections, allowance, and early passage through issuance. If the Examiner has any questions, the Examiner is invited to contact the Applicant's agent listed below.

Respectfully submitted,

BLACK LOWE & GRAHAM^{PLLC}



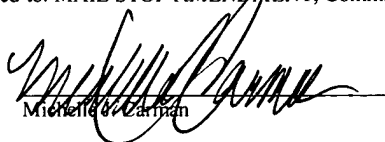
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MAIL CERTIFICATE

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1/18/06

Date of Deposit


Michelle L. Zarnian